

## REMARKS

### *The Present Invention*

The present invention relates to recording media, coating compositions useful in making recording media and methods of preparing the same. Claims 1-43 are currently pending.

### *Summary of the Office Action*

The Office Action alleges that the pending claims present distinct inventions under 35 U.S.C. § 121 and require restriction to one of three groups of claims: Group I consisting of claims 1-7, 27, and 28, Group II consisting of claims 8-24, or Group III consisting of claims 25 and 26.

### *Discussion of the Amendments*

The specification has been amended to recite alumina particles having a mean aggregate diameter of “preferably from about 80 nm about 300 nm” and a surface area of “about 20-400 m<sup>2</sup>/g.” These amendments are supported by claims 5 and 6 as originally filed. Claims 5, 10, and 15 have been amended to recite a mean aggregate diameter of “less than about 1 μm,” as supported by the specification, for example, at page 7, lines 8-10. In addition, new claims 29-43 have been added to recite more specific properties of the aggregates of the alumina particles in the recording medium, the coating composition, and the method of making a coating composition. These amendments are supported by the existing specification, for example, at page 7, lines 10-36, and page 9, line 34, through page 10, line 2. No new matter has been added by way of these amendments. A complete set of the pending claims after amendment is included herewith for the Examiner’s convenience.

### *Clarification of the Office Action’s Interpretation of the Pending Claims*

As an initial matter, applicants note that the Office Action characterizes some of the claims as being drawn to magnetic recording medium. However, it is clear from the specification that the term “recording media” or “recording medium” as used in conjunction with the present invention refers to the type of recording medium used, for example, in ink-printing applications (see page 1, lines 16-20), which is quite different from magnetic recording medium.

### *Response to Restriction Requirement*

The Office Action alleges that the pending claims pertain to three distinct inventions represented by Groups I-III, as described above. In response to the restriction requirement,

applicants elect Group I (i.e., claims 1-7, 27 and 28) for further prosecution; however, applicants believe that the restriction requirement is improper and should be withdrawn. Accordingly, the election of the Group I claims is made with traverse.

The Manual of Patent Examining Procedure (MPEP) recites the requirements for a proper restriction requirement. In particular, the MPEP states:

There are two criteria for a proper requirement for restriction between patentably distinct inventions:

(A) The inventions must be independent (see MPEP Section 802.01, Section 806.04, Section 808.01) or distinct as claimed (see MPEP Section 806.05 - Section 806.05(i)); *and*

(B) There must be a serious burden on the examiner if restriction is required (see MPEP Section 803.02, Section 806.04(a) - Section 806.04(i), Section 808.01(a), and Section 808.02).

(M.P.E.P. § 803 (emphasis added)). Thus, there are *two separate criteria that must be satisfied to support a proper restriction requirement*. The fact that *both* criteria must be satisfied is made all the more clear by the following statement in the MPEP:

If the search and examination of an entire application can be made without serious burden, the examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions.

(M.P.E.P. § 803 (emphasis added)). Thus, if the subject matter of the pending claims is such that there would be no serious burden on the examiner to search and examine all of the pending claims at the same time, the examiner is to do so, *even if* the pending claims are drawn to independent or distinct inventions.

In the present case, the Office Action points out with detail the reasons why the claims are allegedly distinct; however, a comparison of the claims of Groups I, II, and III makes it abundantly clear that all of the claims have quite similar subject matter and overlap to such an extent that there will be no serious burden on the Examiner to search and examine all of the pending claims (e.g., claims 1-43) at the same time. For example, please note the similarities between the description of the recording medium in claim 1 (Group I) and the description of the

coating composition and method of claims 8 and 13 (Group II), each of which recite a coating composition or coating comprising alumina particles and a binder, wherein the alumina particles are aggregates of primary particles. Additionally, please note the similarity of the description of the alumina particles of the recording medium coating of claims 4-7 (Group I) and of the coating composition of claims 9-12 and 14-17 (Group II), which recite the same characteristics with respect to the diameter, surface area, amount, and preferred type of alumina particles. Indeed, claims 25 and 26 (Group II) and claims 27 and 28 (Group I) all depend from Group III claims. These many relationships between the claims of the three groups illustrate that there would be no serious burden on the Examiner to search and examine the claims of Groups II and III at the same time as searching and examining the claims of elected Group I.

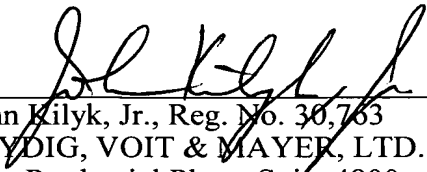
Lastly, applicants wish to direct the Examiner's attention to a similar case in which the U.S. Patent and Trademark Office recently agreed with the applicants' current position and withdrew an analogous restriction requirement. Specifically, U.S. Patent Application No. 09/411,164 (currently pending) contains claims to (i) a recording medium comprising a dispersion, (ii) a dispersion, and (iii) a method of preparing the dispersion, much like the present application. After considering the applicants' arguments, the U.S. Patent and Trademark Office found that the restriction requirement was unwarranted. Given the similarities between the cases, applicants believe the same result would be appropriate in the present application.

For the foregoing reasons, applicants request withdrawal of the restriction requirement, such that all the pending claims are considered together. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

*Conclusion*

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

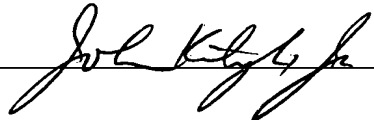
  
\_\_\_\_\_  
John Kilyk, Jr., Reg. No. 30,763  
LEYDIG, VOIT & MAYER, LTD.  
Two Prudential Plaza, Suite 4900  
180 North Stetson  
Chicago, Illinois 60601-6780  
(312) 616-5600 (telephone)  
(312) 616-5700 (facsimile)

Date: December 18, 2001

**CERTIFICATE OF MAILING**

I hereby certify that this RESPONSE TO OFFICE ACTION (along with any documents referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Date: December 18, 2001

  
\_\_\_\_\_

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:  
Darsillo et al.

Art Unit: 1773

Application No. 09/670,118

Examiner: K. Bernatz

Filed: September 26, 2000

For: RECORDING MEDIUM

**AMENDMENTS TO SPECIFICATION AND CLAIMS  
MADE IN RESPONSE TO OFFICE ACTION DATED OCTOBER 19, 2001**

*Amendments to the existing specification at page 7, line 32 – page 8, line 7:*

In certain preferred embodiments, the mean diameter of the alumina particles is at least about 40 nm (e.g., particles having a mean diameter from about 40 nm to about 300 nm, preferably from about 80 nm about 300 nm, more preferably from about 100 nm to about 200 nm, still more preferably from about 120 to about 190 nm, and most preferably from about 140-180 nm (e.g., from about 150-170 nm)). In certain of these embodiments, at least about 80% (e.g., at least about 90%) or substantially all of the alumina particles have diameters of at least about 100 nm (e.g., from about 100 nm to about 200 nm, more preferably from about 120 to about 190 nm, and most preferably from about 140-180 nm (e.g., from about 150-170 nm)).

*Amendments to the existing specification at page 9, line 22 – page 10, line 2:*

It will be appreciated that the surface area of the alumina particles of the recording medium of the present invention is largely a function of the mean diameter of the primary particles, rather than the mean diameter of the aggregates. The alumina particles of the recording medium of the present invention can have any suitable surface area. While the alumina particles of the recording medium of the present invention can have a surface area of up to about 400 m<sup>2</sup>/g (e.g., about 20-400 m<sup>2</sup>/g), it is preferred that the surface area of the alumina particles of the recording medium of the present invention have a surface area of less than about 200 m<sup>2</sup>/g, more preferably less than about 150 m<sup>2</sup>/g. In a particularly preferred

embodiment, the alumina particles of the recording medium of the present invention have a surface area of less than about 400 m<sup>2</sup>/g (e.g., about 15-300 m<sup>2</sup>/g, more preferably about 20-200 m<sup>2</sup>/g, more preferably about 30-80 m<sup>2</sup>/g, and most preferably about 40-60 m<sup>2</sup>/g).

*Amendments to existing claims:*

5. The recording medium of claim 1, wherein the aggregates have a mean diameter of less than about [80-300 nm] 1  $\mu$ m.

10. The coating composition of claim 8, wherein the aggregates have a mean diameter of less than about [80-300 nm] 1  $\mu$ m.

15. The method of claim 13, wherein the aggregates have a mean diameter of less than about [80-300nm] 1  $\mu$ m.

29. (New) The recording medium of claim 5, wherein the aggregates have a mean diameter of about 80-300 nm.

30. (New) The recording medium of claim 29, wherein the aggregates have a mean diameter of about 100-200 nm.

31. (New) The recording medium of claim 6, wherein the aggregates have a surface area of about 20-200 m<sup>2</sup>/g.

32. (New) The recording medium of claim 31, wherein the aggregates have a surface area of about 30-80 m<sup>2</sup>/g.

33. (New) The recording medium of claim 32, wherein the aggregates have a surface area of about 40-60 m<sup>2</sup>/g.

34. (New) The coating composition of claim 10, wherein the aggregates have a mean diameter of about 80-300 nm.

35. (New) The coating composition of claim 34, wherein the aggregates have a mean diameter of about 100-200 nm.

36. (New) The coating composition of claim 11, wherein the aggregates have a surface area of about 20-200 m<sup>2</sup>/g.

37. (New) The coating composition of claim 36, wherein the aggregates have a surface area of about 30-80 m<sup>2</sup>/g.

38. (New) The coating composition of claim 37, wherein the aggregates have a surface area of about 40-60 m<sup>2</sup>/g.

39. (New) The method of claim 15, wherein the aggregates have a mean diameter of about 80-300 nm.

40. (New) The method of claim 39, wherein the aggregates have a mean diameter of about 100-200 nm.

41. (New) The method of claim 16, wherein the aggregates have a surface area of about 20-200 m<sup>2</sup>/g.

42. (New) The method of claim 41, wherein the aggregates have a surface area of about 30-80 m<sup>2</sup>/g.

43. (New) The method of claim 42, wherein the aggregates have a surface area of about 40-60 m<sup>2</sup>/g.